[10191/1690]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:		Examiner: L. Alejandro Mulero
	Volker BECKER et al.	
For:	DEVICE AND METHOD FOR ETCHING A SUBSTRATE USING AN INDUCTIVELY COUPLED PLASMA	
Filed:	May 8, 2001	Art Unit: 1795
Serial No.:	09/762,985	

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF TRANSMITTAL

SIR:

Accompanying this Reply Brief Transmittal is a Reply Brief pursuant to 37 C.F.R. § 41.41 for filing in the above-identified patent application, together with two courtesy copies thereof (although not required). The two-month reply brief due date is August 26, 2008, since the Examiner's Answer was mailed on June 26, 2008 ("the Answer").

While no fee is believed to be due, the Commissioner is authorized to charge, as necessary and/or appropriate, any additional and appropriate fees (including any extension fees) or credit any overpayment to Deposit Account No. **11-0600**. A duplicate copy of this transmittal letter is enclosed for that purpose.

Respectfully submitted,

Dated: 8/26/2008

By: _____

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[10191/1690]

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Volker BECKER et al.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
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In re Application of:		Examiner: L. Alejandro Mulero
	Volker BECKER et al.	
For:	DEVICE AND METHOD FOR ETCHING A SUBSTRATE USING AN INDUCTIVELY COUPLED PLASMA	
Filed:	May 8, 2001	Art Unit: 1763
Serial No.:	09/762,985	

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.37

SIR:

In the above-identified patent application ("the present application"), an Answer issued on June 26, 2008, so that the two-month reply brief due date is August 26, 2008. This Reply Brief is being filed by the two-month response date.

For the reasons explained in the Appeal Brief and those explained below, it is again respectfully submitted that the final rejections of claims 42-45, 47-71, and 74 should be reversed for the reasons explained below, so that these claims may be allowed.

REPLY

A. The § 112, ¶ 1, Rejections of Claims 42 to 45 And 47 to 71

Claims 42 to 45 and 47 to 71

The Office bears the initial burden of presenting "evidence or reasons why persons skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims." (See M.P.E.P. § 2163.04 (citing In re Wertheim 541 F.2d 257, 262, 265, 191 U.S.P.Q. 90, 96, 98 (C.C.P.A. 1976))) (emphasis added).

It is respectfully submitted that the arguments and assertions in the Answer (as well as the Office Actions to date) simply do not identify why the rejected claims are not supported by the written description of the present application (and its specification) — which it plainly is, as explained herein.

The Manual of Patent Examining Procedure specifically provides that if the Office rejects a claim based on the lack of a written description, the examiner should "identify the claim limitation not described" and also provide "*reasons why persons skilled in the art would not recognize the description of this limitation in the disclosure of the application.*" (See id.).

In this regard, the Answer (as well as the Office Actions to date) does not explain why a person skilled in the art would not recognize the exclusionary feature of claim 42. The Answer (as well as the Office Actions to date) also does not even address (let alone refute) the fact that since, for example, the specification (see pages 3 to 5) specifically discusses the reflected power problem, makes plain that it solves this problem by using, for example, frequency variation, so that there is no reference to solving the problem by using the prior reference approach of measuring the ratio of magnitudes of applied and reflected power of the generator -- which the Answer (as well as the Office Actions to date) only conclusorily asserts would have been known by those skilled in the art.

As to the Answer (as well as the Office Actions to date), the Office maintains that "the negative limitation does not have support in the specification, as originally filed, and any

negative limitation or exclusionary provision must have basis in the original disclosure," (citing M.P.E.P. 2173.05(i)). However, the M.P.E.P. 2173.05(i) makes it plain that lack of literal basis for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support, (citing *Ex Parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993)). Thus the Office may not rely solely on a conclusory assertion of lack of literal support for a negative limitation to establish a *prima facie* case of lack descriptive support under 35 U.S.C. ¶ 1.

Contrary to the Office's conclusory assertions, the exclusionary feature of "without measuring the ratio of magnitudes of applied and reflected power of the generator" as provided for in the context of claim 42 is disclosed in and plainly supported by the specification. Claim 42 specifically provides that the "variation of the frequency is automatically performed by a Meissner oscillator feedback loop between the ICP coil and the ICP coil generator input without measuring the ratio of magnitudes of applied and reflected power of the generator." Figure 1 and corresponding text specifically discloses that a Meissner oscillator feedback loop is formed between the ICP coil contained in the IPC source 13 and the ICP coil generator 17 (see Specification p.10, ll. 13 to 15). Figure 2 further discloses a detailed example Meissner oscillator feedback loop according to one example embodiment of the presently claimed subject matter. This plainly discloses and supports the exclusionary feature. There is no specific recitation of "measuring the ratio of magnitudes of applied and reflected power of the generator" as a way to achieve "variation of the frequency" in the detailed example embodiment of Figure 2, as asserted.

As to the assertion contained in the Response to Argument that "page 14, lines 10-14, of the specification, make clear that both the applied and reflected powers are measured in the instant invention," it is respectfully submitted that the cited portion of the specification as asserted by the Office (which is not conceded) does not specifically recite *measuring the ratio of magnitudes of applied and reflected power of the generator*.

In view of the foregoing, it is respectfully submitted that the arguments and assertions contained in the Answer (as well as the Office Actions to date) do not satisfy the evidentiary and judicial standards discussed above, and it is respectfully submitted that the Answer (as well as the Office Actions to date) does not establish a *prima facie* written description case

with respect to the present application. It is therefore respectfully submitted that the present application does satisfy the written description requirement of 35 U.S.C. § 112. Accordingly, it is respectfully submitted that the "written description" rejection of the claims should be reversed.

It is therefore respectfully submitted that the arguments and assertions contained in the Answer (as well as the Office Actions to date) simply do not explain why the subject matter of the rejected claims is not supported by the written description of the present application — which it plainly is for the reasons explained herein.

B. The "Kadomura"/"Collins"/"Koshimizu" Rejection Under 35 U.S.C. § 103(a) Of Claim 74

Claim 74

Claim 74 was rejected under 35 U.S.C. § 103(a) as obvious over Kadomura, U.S. Patent No. 5,662,819 in view of Collins et al., U.S. Patent No. 6,217,785, Wilbur, U.S. Patent No. 6,020,794, and Koshimizu, U.S. Patent No. 5,997,687.

Independent claim 74 is supported by the present application (including, for example, the specification at pages 3 to 5), and includes the feature which provides that *the variation of the frequency is such as to avoid high reflected powers back into the ICP coil generator when the plasma power is pulsed*. This feature, as provided for in the context of claim 74, is in no way described or even suggested by any of the references applied to date.

Accordingly, claim 74 is allowable over the references applied to date, since they do not in any way disclose or suggest this feature.

As to the conclusory assertion in the Response to Argument that the Abstract and Figure 1 and its description of the "Wilbur" reference discloses the "variation of the frequency is such as to avoid high reflected powers back into the ICP coil generator when the plasma power is pulsed" as provided for in the context of claim 74, the cited portion of the "Wilbur" reference merely refers to achieving a lowest value of the power ratio, which does not disclose "avoid[ing] high reflected powers" as provided for in the context of claim 74.

Further, the "Wilbur" reference does not disclose the feature of "avoid[ing] high reflected powers when the plasma is pulsed" as provided for in the context of claim 74. The

text at page 2, line 31 to page 3, line 5 of the specification makes it plain that the traditional "adiabatic power transition, i.e., a gradual increase or reduction of the injected plasma power" is not possible in the face of faster changes. The cited "Wilbur" reference clearly concerns an iterative approach to frequency tuning where many iterative steps are needed to achieve -- if even possible, the asserted minimum ratio. The iterative approach of the "Wilbur" reference represents an "adiabatic power transition" to a skilled person in the art – a type of approach that the presently claimed subject matter tries to overcome.

It is respectfully submitted that any review of the references makes plain that they nowhere disclose or suggest the claim 74 features, so that claim 74 is allowable.

C. The "Savas"/"Collins"/"Koshimizu" Rejection Under 35 U.S.C. § 103(a) Of Claim 74

Claim 74

Claim 74 was rejected under 35 U.S.C. § 103(a) as obvious over Savas, WO 97/14177 in view of Collins et al., U.S. Patent No. 6,217,785, Wilbur, U.S. Patent No. 6,020,794, and Koshimizu, U.S. Patent No. 5,997,687.

Claim 74 is allowable over the references applied to date, since they do not in any way disclose or suggest the feature which provides that *the variation of the frequency is such as to avoid high reflected powers back into the ICP coil generator when the plasma power is pulsed*.

As to the assertion in the Response to Argument that the abstract and Figure 1 and its description of the "Wilbur" reference clearly teaches the feature of "the variation of the frequency is such as to avoid high reflected powers back into the ICP coil generator when the plasma power is pulsed" as provided for in the context of claim 74, Applicant respectfully disagrees. The cited portion of the "Wilbur" reference merely concerns achieving a lowest value of the power ratio, which does not disclose "to avoid high reflected powers" as provided for in the context of claim 74.

Further, the "Wilbur" reference does not disclose the feature of "to avoid high reflected powers when the plasma is pulsed" as provided for in the context of claim 74. The text at page 2, line 31 to page 3, line 5 of the specification makes it plain that the traditional

"adiabatic power transition, i.e., a gradual increase or reduction of the injected plasma power" is not possible in the face of faster changes. The cited "Wilbur" reference clearly concerns an iterative approach to frequency tuning where many iterative steps are needed to achieve, if ever, the alleged minimum ratio. The iterative approach of the "Wilbur" reference represents an "adiabatic power transition," to a skilled person in the art – a type of approach that the presently claimed subject matter is intended to overcome.

It is respectfully submitted that any review of the references makes plain that they do not disclose or suggest the claim 74 features, so that claim 74 is allowable.

D. The "Koshimizu '373"/"Collins"/"Koshimizu" Rejection Under 35 U.S.C. § 103(a) Of Claim 74

Claim 74

Claim 74 was rejected under 35 U.S.C. § 103(a) as obvious over Koshimizu, U.S. Patent No. 5,935,373 in view of Collins et al., U.S. Patent No. 6,217,785, Wilbur, U.S. Patent No. 6,020,794, and Koshimizu, U.S. Patent No. 5,997,687.

Claim 74 is allowable over the references applied to date, since they do not in any way disclose or suggest the feature which provides that *the variation of the frequency is such as to avoid high reflected powers back into the ICP coil generator when the plasma power is pulsed*.

As to the assertion in the Response to Argument that the abstract and Figure 1 and its description of the "Wilbur" reference clearly teaches the feature of "the variation of the frequency is such as to avoid high reflected powers back into the ICP coil generator when the plasma power is pulsed" as provided for in the context of claim 74, Applicant respectfully disagrees. The cited portion of the "Wilbur" reference merely concerns achieving a lowest value of the power ratio, which does not disclose "to avoid high reflected powers" as provided for in the context of claim 74.

Further, the "Wilbur" reference does not disclose the feature of "to avoid high reflected powers when the plasma is pulsed" as provided for in the context of claim 74. The text at page 2, line 31 to page 3, line 5 of the specification makes it plain that the traditional "adiabatic power transition, i.e., a gradual increase or reduction of the injected plasma

power" is not possible in the face of faster changes. The cited "Wilbur" reference clearly concerns an iterative approach to frequency tuning where many iterative steps are needed to achieve -- if even possible, the asserted minimum ratio. The iterative approach of the "Wilbur" reference represents an "adiabatic power transition" to a skilled person in the art – a type of approach that the presently claimed subject matter is intended to overcome.

It is respectfully submitted that any review of the references makes plain that they do not disclose or suggest the claim 74 features, so that claim 74 is allowable.

In short, claims 42 to 45, 47 to 71 and claim 74 are allowable for all of the above reasons.

CONCLUSION

In view of the above, it is respectfully requested that the rejections of claims 42 to 45, 47 to 71 and 74 be reversed, and that these claims be allowed as presented.

Respectfully submitted,

Dated: 8/26/2008

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